relatively unimportant. Lists of species present three and four years after the eruption are given.—GEO. D. FULLER.

Soil moisture.—The increasing demand for the use of quantitative studies of soil moisture in ecological and agricultural studies makes ALWAY'S[8] investigation of methods for the accurate determination of the hygroscopic coefficient very timely. HILGARD'S method is found to give reliable results, but certain changes in details of manipulation are found to be desirable as matters of convenience. Two important conclusions are that the amount of hygroscopic moisture absorbed increases with rise of temperature, and that 12 hours' exposure to saturated atmosphere is sufficient, provided the soil layer is very shallow.—GEO. D. FULLER.

A new disease of wheat.—SMITH[9] has announced the appearance in the Middle West of a new disease of wheat, which he says "is a matter of much concern." The disease has been known since 1902, but the destruction of winter wheat in 1917, which has generally been ascribed to winter-killing, led to the suspicion that a part of the loss might be due to this new disease. It is believed to be of bacterial origin, and promises to be difficult to control.

The disease attacks not only the leaves, glumes, awns, rachis, and stalk, but sometimes also the kernel itself, suggesting that it is carried over from year to year on the seed.—J. M. C.

Vegetation of Colorado.—A valuable bulletin by ROBBINS[10] is a continuation of his work on the vegetation of Colorado in its relation to climate.[11] Comprehensive tables show what is known about the climates of the state as to temperature, precipitation, frost, humidity, length of growing seasons, etc. Following the statistical matter is a brief account of the chief types of vegetation and their relation to agriculture, under the following headings: grass-steppe, shrub-steppe, chaparral, pinyon pine-juniper woodland zone, yellow pine forest zone, lodgepole pine forest zone, white fir forest zone, Engelmann spruce forest zone. Maps and charts are freely employed. Useful lists of the more important trees, shrubs, and herbs are given. Publications such as this for other states would be of great value to botanists as well as to farmers.—FRANCIS RAMALEY.

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[8] ALWAY, F. J., and others. Some notes on the direct determination of the hygroscopic coefficient. Jour. Agric. Research **11**:147–166. 1917.

[9] SMITH, ERWIN F., A new disease of wheat. Jour. Agric. Research **10**:51–53. *pls. 4–8.* 1917.

[10] ROBBINS, WILFRED W., Native vegetation and climate of Colorado in their relation to agriculture. Bull. no. 224 Colo. Agric. Exper. Sta., Ft. Collins, Colo. 1917.

[11] BOT. GAZ. **49**:256–280. 1910.